

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A radar system mounted on a vehicle for detecting a target object, comprising:
 - a transmitting means for transmitting an electromagnetic wave;
 - a receiving means for receiving the electromagnetic wave reflected by the target object;
 - a signal processing means for measuring a distance between a vehicle and the target object and a relative velocity on the basis of the transmitting electromagnetic wave and the receiving electromagnetic wave; and
 - an interference detecting means for suspending a transmit operation of the transmitting means under a control of the signal processing means, and detecting an interference signal from an external device.
2. (original): A radar system mounted on a vehicle according to claim 1, further comprising a beam scanning means that changes a transmit direction of the electromagnetic wave by the transmitting means and a receive direction of the electromagnetic wave by the receiving means,
 - wherein the interference detecting means suspends the transmit operation in a given scanning direction set by the beam scanning means.
3. (original): A radar system mounted on a vehicle according to claim 1, wherein the interference detecting means detects the interference signal by detecting a rise of noise floor.

4. (original): A radar system mounted on a vehicle according to claim 3, wherein the interference detecting means sets a given interference wave detection threshold value that is higher than a normal signal detection threshold value with respect to the rise of the noise floor.

5. (original): A radar system mounted on a vehicle according to claim 1, wherein the interference detecting means detects the interference signal by detecting a peak of a spectrum.

6. (original): A radar system mounted on a vehicle according to claim 5, wherein the interference detecting means sets a given interference wave detection threshold value that is higher than a normal signal detection threshold value with respect to the peak of the spectrum.

7. (previously presented): A radar system mounted on a vehicle according to claim 1, wherein the interference detecting means detects the interference signal by detecting a rise of a noise floor and a peak of a spectrum.

8. (original): A radar system mounted on a vehicle according to claim 2, wherein the given scanning direction set by the beam scanning means is at an end of a predetermined scanning range.

9. (original): A radar system mounted on a vehicle according to claim 2, wherein the given scanning direction set by the beam scanning means is at both ends of a predetermined scanning range.

10. (original): A radar system mounted on a vehicle according to claim 2, wherein the given scanning direction set by the beam scanning means is at a center of a predetermined scanning range.

11. (previously presented): A radar system mounted on a vehicle according to claim 2, wherein the given scanning direction set by the beam scanning means is a forward direction of the vehicle.

12. (original): A radar system mounted on a vehicle according to claim 2, wherein the given scanning direction set by the beam scanning means is sequentially changed within a predetermined scanning range.

13. (currently amended): A radar system mounted on a vehicle for detecting a target object, comprising:

a transmitter for transmitting an electromagnetic wave;
a receiver for receiving the electromagnetic wave reflected by the target object;
a control circuit for measuring a distance between a vehicle and the target object and a relative velocity on the basis of the transmitting electromagnetic wave and the receiving electromagnetic wave, suspending a transmit operation of the ~~transmitting means~~transmitter ~~under a control of the signal processing means~~, and detecting an interference signal from an external device.